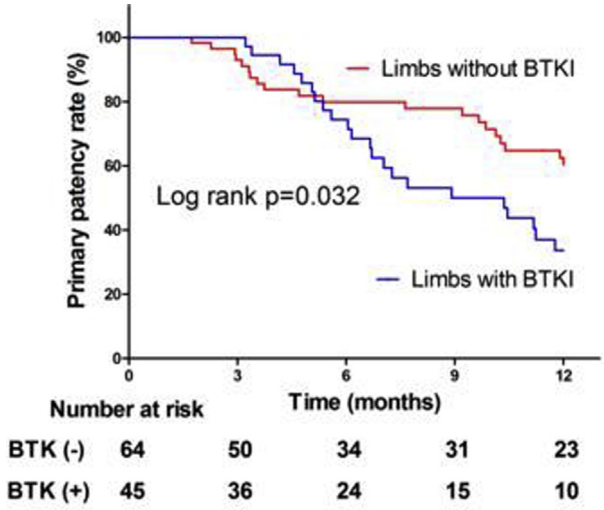
angiography or computed tomography. We compared the outcomes of SFA angioplasty with versus without combined BTKI.
Results: More limbs treated with BTKI showed absence of any run-off vessel before angioplasty (56% vs 19%, p< 0.001). Other baseline characteristics were similar. SFA lesion length did not differ between the limbs with and without BTKI (226±101 vs 248±72 mm, p=0.214). At 1-year follow-up, overall mortality rate was 14% and 7% for patients with and without BTKI, retrospectively (p=0.235). There was no major amputation in both groups. Unexpected minor amputation rate was 11% and 3%, respectively (p=0.120). Target vessel revascularization rate for limbs with BTKI was 18% versus 11% for limbs without BTKI (p=0.292). Kaplan-Meier analysis showed limbs with BTKI have a lower 1 year patency rate (log rank p=0.032) than those without BTKI.



Conclusions: BTKI showed no beneficial impact on outcomes of SFA lesions after angioplasty in limbs with poor run-off vessels.

TCT-542

Laser Atherectomy for Treatment of Femoropoliteal In-Stent Restenosis

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Background: Femoropoliteal in-stent restenosis (FP-ISR) is associated with high rates of recurrent stenosis and stent occlusion after endovascular therapy. Laser atherectomy provides neointimal debulking and possible subsequent improved patency in the treatment of FP-ISR.
Methods: All cases of FP-ISR treated between 2006-2013 were retrospectively identified. FP-ISR was divided into three angiographic classes: Class I (≤ 50 mm length); Class II (>50 mm length); and Class III (in-stent occlusion). Baseline demographics and lesion angiographic characteristics were compared between groups. Recurrent stenosis, as assessed by duplex ultrasound, was determined routinely at 3-4 month intervals up to 24 months post-intervention.
Results: One hundred and eighteen patients underwent endovascular treatment of FP-ISR. Thirty-seven patients (31%) were treated with laser atherectomy and balloon angioplasty, while 81 patients were treated with balloon angioplasty. Patients treated with laser atherectomy had longer mean lesion length of FP-ISR (185 mm vs. 116 mm, p=0.001) and were more likely to have Class III ISR (54% vs. 20%, p=0.001) and TASC C/D lesions (64% vs. 35%, p=0.007). Procedural success was achieved in 100% of laser-assisted cases and 98% of non-laser-assisted cases. Complication rates were low, with four distal embolizations in the laser group and one in the non-laser group (p=0.01). There was no association between laser atherectomy and rates of recurrent stenosis or occlusion for patients with Class I or Class II FP-ISR. In comparison, patients with Class III FP-ISR treated with laser atherectomy were less likely to develop recurrent stenosis at one year (54% vs. 91%, p=0.05) and two year (69% vs. 100%, p=0.05) follow-up.

Variable	Laser (N = 37)	No Laser (N = 81)	P value
Age, years	73 ± 11	69 ± 11	0.06
Male (%)	18 (49)	41 (51)	0.9
ABI	0.70 ± 0.22	0.65 ± 0.18	0.3
TBI	0.33 ± 0.21	0.37 ± 0.18	0.4
Total lesion length, mm	185 ± 118	114 ± 106	0.001
Reference vessel diameter, mm	5.3 ± 0.6	5.3 ± 0.7	0.9
TASC II C/D	21 (64)	25 (35)	0.007
Tosaka Class			0.001
1	5 (14)	32 (40)	
2	12 (32)	32 (40)	
3	20 (54)	17 (20)	

Conclusions: Laser atherectomy with adjunctive balloon angioplasty may be associated with improved patency when used to treat complex FP-ISR, including longer lesions and in-stent occlusions.

TCT-543

Middle-Term Clinical Outcome of Femoropopliteal Stenting with Drug-Eluting Stent for Diabetic Patients

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Background: Previous studies revealed that diabetes mellitus is associated with the early restenosis after nitinol stenting in the femoropopliteal (FP) disease. The purpose of this study is to investigate the advantage of endovascular therapy (EVT) with drug eluting stents (DES) for FP lesions in diabetic patients.
Methods: This is a single center, retrospective observational study. Between July 2008 and April 2013, 101 FP lesions in 76 diabetic patients were treated with bare metal stents (BMS group). 52 FP lesions in 42 diabetic patients were treated with Zilver PTX paclitaxel-eluting nitinol stents (DES group). We evaluate the clinical outcomes at 8 months after EVT. Stent patency was assessed by either duplex ultrasound or angiography.
Results: Follow-up rate at 8 months were 96% (73 patients) in BMS group and 93% (39 patients) in DES group. Primary patency rates at 8 months were 92.9% with BMS and 89.6% with DES . (p=0.50) Major adverse limb events (MALE) occurred in 3 limbs with BMS and 4 limbs with DES in 8 months after stenting. (p=0.14) Survival rate at 8 months were similar. (95.9% vs 89.4% p=0.21) Event-free survival rate (freedom from all death, MALE and restenosis) were not significant different. (87.7% vs 76.9% p=0.15).
Conclusions: FP stenting for diabetic patients with DES offers no significant advantage over BMS in middle- term clinical outcome.

TCT-544

Post-Procedural Intravascular Ultrasound Findings on Short-Term Outcomes of Drug-Eluting Stent Implantation for Femoropopliteal Lesions

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Background: It has not been reported that intravascular ultrasound (IVUS) findings correlate with drug eluting stent (DES) restenosis after endovascular therapy for femoropopliteal lesions. So we investigated that in this study.
Methods: This was a single center non-randomized retrospective study. From April 2012 to March 2013, a total of 71 consecutive de novo femoropopliteal lesions in patients who underwent intravascular ultrasound (IVUS) after DES implantation were included. The mean follow-up period was 12±4 months. In-stent restenosis (ISR) was defined as a peak systolic velocity ratio >2.4 on duplex ultrasonography or >75% stenosis on angiography. ISR were detected in 14 lesions (19.7%). Subjects were classified into two groups: the patients with ISR (ISR group, 14 lesions, 12 patients) and without ISR (non-ISR group, 57 lesions, 49 patients). We compared post-procedural IVUS findings between two groups.
Results: For baseline patients and lesion characteristics, the percentage of women was higher in ISR group than non-ISR group (83.3% vs. 20.4%, p< 0.05). There were no significant differences between two groups in diabetes mellitus (33.3% vs. 32.7%, p=0.96), hemodialysis (8.3% vs. 26.5%, p=0.18), TASC II classified C or D lesions (28.6% vs. 35.1%, p=0.64), and critical limb ischemia (33.3% vs. 53.0%, p=0.22).